

REMARKS

In the Office Action, claims 4-7 and 9-11 were objected to under 37 CFR 1.75(c) as being in improper form. Claim 8 was rejected under 35 USC §112, second paragraph. Claims 1-3 were rejected under 35 USC §103(a) as being unpatentable over Grajek in view of Lipp.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made".

In paragraph 5 of the Office Action, the Examiner rejects Claims 1-3 as being unpatentable over Grajek (U.S. Patent No. 4,391,177) in view of Lipp (U.S. Patent No. 5,602,355). Specifically, the Examiner notes that Grajek discloses the use of a soundboard for a musical instrument made of wood. Lipp discloses the use of a musical instrument (as drumsticks) made of wood and polycarbonate. The Examiner then indicated it to be obvious to make a sound board out of polycarbonate on the basis of the teaching of Lipp. However, this would appear to be an improper combination.

Firstly, Lipp is concerned with drumsticks, not with musical instruments having soundboards. There is no suggestion in Lipp that its use of polycarbonate could be extended to other musical instruments, and no specific teaching that its use of

polycarbonates could be used in sound boards for other musical instruments.

Similarly, Grajek is not concerned with using polycarbonate soundboards and makes no indication of a desirability to replace a conventional wooden soundboard with an alternative one and in particular makes no suggestion of the use of a polycarbonate sound board. Therefore, although the subject matter of the two cited patents is relevant, there is no teaching nor is there any suggestion of the desirability to combine them so as to arrive at the presently claimed invention.

As it is readily apparent, the acoustic function of a drumstick tip as disclosed in Lipp, and a soundboard as disclosed in the present invention and the Grajek are wholly unrelated. A drumstick needs to provide a very rigid surface in order to effectively strike a drum, whereas a soundboard requires specific resonance properties in order to provide the necessary acoustic effect.

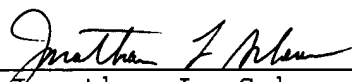
There is no suggestion in the art that expanded polycarbonate as claimed by the present invention can do this. Therefore a combination of Grajek and Lipp is improper. For example, Lipp uses an oriented fibre-resin reinforcement within a filler material to create a "wood-like" structure. This is physically unrelated to the claimed expanded polycarbonates of the present invention which have a foam structure, and in which there is no mention of suggestion of the use of fibre reinforcements.

Based on the foregoing amendments and remarks, it is respectfully submitted that the claims in the present application, as they now stand, patentably distinguish over the references cited and applied by the Examiner and are, therefore, in condition for allowance. A Notice of Allowance is in order, and such favorable action and reconsideration are respectfully requested.

However, if after reviewing the above amendments and remarks, the Examiner has any questions or comments, he is cordially invited to contact the undersigned attorneys.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please amend the specification as follows:

Please insert the following paragraph on page 1, before
line 4.

-- This is a nationalization of PCT/GB00/03073 filed August
9, 2000 and published in English.

Field of the Invention --

Please insert the following paragraph on page 1, before
line 7.

-- Background of the Invention --

Please insert the following paragraph on page 1, before
line 22.

-- Summary of the Invention --

Please insert the following paragraph on page 4, before
line 15.

-- Brief Description of the Drawings --

IN THE ABSTRACT:

Please add the new Abstract of the Disclosure submitted herewith on a separate sheet.

IN THE CLAIMS:

Please amend claims 2-11 as follows:

2. (Amended) ~~An~~ The acoustic device according to claim 1, wherein said soundboard ~~comprising~~ comprises an expanded polycarbonate sheet.

3. (Amended) ~~An~~ The acoustic device according to ~~either one of the preceding claims~~ claim 1, wherein said soundboard ~~having~~ has a cellular rigid foam structure.

4. (Amended) ~~An~~ The acoustic device according to ~~any one of the preceding claims~~ claim 1, wherein said soundboard ~~having~~ has a density of 500-700 kg/m³.

5. (Amended) ~~An~~ The acoustic device according to claim 4, wherein said soundboard ~~having~~ has a density fo 650 kg/m³.

6. (Amended) ~~An~~ The acoustic device according to ~~any one of the preceding claims~~ claim 1, wherein said soundboard ~~having~~ has a tensile strength of about 20 Mpa.

7. (Amended) ~~An~~ The acoustic device according to ~~any one of the preceding claims~~ claim 1, wherein said soundboard having has a flexural strength of about 30 N/mm².

8. (Amended) ~~An~~ The acoustic device according to claim 1, wherein said soundboard ~~comprising FOREX-EPC-E 50.650~~ includes a density of 650 kg/m³, a tensile strength of about 20 Mpa and a flexural strength of about 30 N/mm².

9. ~~An~~ The acoustic device according to ~~any one of the preceding claims~~ claim 1, comprising a musical instrument.

10. (Amended) ~~An~~ The acoustic device according to claim 9, comprising a stringed musical instrument.

11. (Amended) ~~An~~ The acoustic device according to claim 10, comprising a stringed musical instrument selected from the group comprising guitar, violin, mandolin, base, lute, dulcimer, harp and piano.

ABSTRACT OF THE DISCLOSURE

B12 Acoustic devices, particularly musical instruments, having a soundboard formed from expanded polycarbonate, methods of manufacture of same, and the use of specific soundboards in the manufacture of acoustic devices.
